

REMARKS

Claims 1-13 have been amended. Claims 14-27 and 39-45 were previously cancelled, without prejudice to the underlying subject matter. Claims 28-38 have been withdrawn from consideration by the Examiner in response to an election/restriction. Claims 1-13 and 28-38 are pending.

Claims 1-13 stand rejected under 35 U.S.C. § 102(e) as being anticipated by published U.S. application 09/951,882 ("Kozicki et al." publication no. 2002/0168820). Applicant respectfully traverses this rejection.

Claim 1, as amended, defines a memory cell and recites "a first electrode over a substrate" and "a second electrode, wherein the first electrode and the second electrode provide electrical access to a memory cell body" and "a silver chalcogenide layer disposed between the first electrode and the second electrode, where the first layer forms a first portion of the memory cell body" and "a rigid chalcogenide glass layer, wherein the rigid chalcogenide glass layer is disposed between the first electrode and the second electrode and forms a second portion of the memory cell body, wherein the rigid chalcogenide glass comprises silver chalcogenide material from said silver chalcogenide layer in an amount such that a conductive pathway can form in said rigid chalcogenide glass layer in response to an electric potential applied between the first electrode and the second electrode." Such a device is not disclosed by Kozicki et al.

Kozicki et al. fails to disclose each limitation of claim 1. Kozicki et al. does not disclose "a rigid chalcogenide glass layer." The chalcogenide glasses used for the ion conductor (140) of the Kozicki et al. devices are not rigid, they are what is termed

"floppy." As shown in paragraph 0060, Kozicki et al. discloses starting with a glass, such as $\text{Ge}_{0.20}\text{Se}_{0.80}$, which is "floppy" not "rigid," and then heavily doping it with metal, such as silver, which increases the ratio of germanium to selenium due to the combination of selenium with the dopant metal. Even if this increase raises the *apparent* stoichiometry of the glass to a ration that would have initially (pre-doping) been a rigid glass, e.g., approaching about $\text{Ge}_{0.40}\text{Se}_{0.60}$, it is not rigid when formed in this way because the metal solution in the glass changes the molecular structure of the glass. If such a "memory cell" as disclosed in Kozicki et al. functioned at all as a variable resistance memory, which it likely would not, it would not have the preferred memory functioning found in a rigid chalcogenide glass containing memory cell, as claimed. For this reason, Kozicki et al. does not anticipate independent claim 1 or dependent claims 2-13.

Additionally, Kozicki et al. fails to disclose a rigid chalcogenide glass layer that "comprises silver chalcogenide material from said silver chalcogenide layer in an amount such that a conductive pathway can form in said rigid chalcogenide glass layer in response to an electric potential applied between the first electrode and the second electrode." Kozicki et al. discloses doping a chalcogenide glass layer with metal or metal ions (see paragraphs 0053 and 0060), but makes no reference to incorporating any material into such a rigid chalcogenide glass layer from a proximate silver chalcogenide layer. For this reason, also, Kozicki et al. does not anticipate independent claim 1 or dependent claims 2-13.

Since Kozicki et al. does not anticipate the pending claims, Applicant respectfully requests that the 35 U.S.C. § 102(e) rejection of claims 1-13 be withdrawn.

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Applicant believes the present application is in immediate condition for allowance and respectfully requests a notice of allowance on all claims, i.e., 1-13 and 28-38.

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Respectfully submitted,

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